

TRANSLATION

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>2003P01879</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/053374</b>	International filing date ( <i>day/month/year</i> ) <b>09.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>09.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>H02P6/14</b>		
Applicant <b>BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>4</u> sheets, as follows: <div><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s))  _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <div><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/053374

Box No. I	Basis of the report
1.	<p>With regard to the <b>language</b>, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (Rule 12.3 and 23.1(b))</p> <p><input type="checkbox"/> publication of the international application (Rule 12.4)</p> <p><input type="checkbox"/> international preliminary examination (Rule 55.2 and/or 55.3)</p> <p>2. With regard to the <b>elements</b> of the international application, this report is based on <i>(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)</i>:</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p>pages <u>1-8</u> _____ as originally filed/furnished</p> <p>pages* _____ received by this Authority on _____</p> <p>pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p>nos. _____ as originally filed/furnished</p> <p>nos.* _____ as amended (together with any statement) under Article 19</p> <p>nos.* <u>1-10</u> _____ received by this Authority on <u>02.02.2006 with letter of 30.01.2006</u></p> <p>nos.* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the drawings:</p> <p>sheets <u>2/3, 3/3</u> _____ as originally filed/furnished</p> <p>sheets* <u>1/3</u> _____ received by this Authority on <u>02.02.2006 with letter of 30.01.2006</u></p> <p>sheets* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.</p> <p>3. <input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p> <p>4. <input type="checkbox"/> This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p>

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/053374

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																					
1. Statement	<table><tbody><tr><td rowspan="2">Novelty (N)</td><td>Claims</td><td><u>1-10</u></td><td>YES</td></tr><tr><td>Claims</td><td><u></u></td><td>NO</td></tr><tr><td rowspan="2">Inventive step (IS)</td><td>Claims</td><td><u></u></td><td>YES</td></tr><tr><td>Claims</td><td><u>1-10</u></td><td>NO</td></tr><tr><td rowspan="2">Industrial applicability (IA)</td><td>Claims</td><td><u>1-10</u></td><td>YES</td></tr><tr><td>Claims</td><td><u></u></td><td>NO</td></tr></tbody></table>	Novelty (N)	Claims	<u>1-10</u>	YES	Claims	<u></u>	NO	Inventive step (IS)	Claims	<u></u>	YES	Claims	<u>1-10</u>	NO	Industrial applicability (IA)	Claims	<u>1-10</u>	YES	Claims	<u></u>	NO
Novelty (N)	Claims		<u>1-10</u>	YES																		
	Claims	<u></u>	NO																			
Inventive step (IS)	Claims	<u></u>	YES																			
	Claims	<u>1-10</u>	NO																			
Industrial applicability (IA)	Claims	<u>1-10</u>	YES																			
	Claims	<u></u>	NO																			
2. Citations and explanations (Rule 70.7)	<p>1. Reference is made to the following documents:</p> <p>D1 : EP-A-748 038</p> <p>D2: US-A-2003/0164692.</p> <p>2. The present application fails to satisfy the requirements of PCT Article 33(1) because the subject matter of claim 1, in so far as it can be understood, does not involve an inventive step (PCT Article 33(3)).</p> <p>Document D1 is considered to be the prior art closest to the subject matter of claim 1. Said document discloses a method and a control device for a brushless DC motor that adjusts a lead angle as a function of the motor speed and load (see D1, page 4, lines 23-30). In D1, the lead angle is referred to as "torque angle" and defined as the angle between the rotor position and the activating stator magnet field (see D1, page 1, introduction).</p> <p style="text-align: right;">/...</p>																					

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Document D1 (see the description, page 2, line 38) also refers to optimisation of the phase shift by taking the motor speed and current into account.

D1 also mentions (see the top of the first page of the description, lines 8-29) other documents in which the lead angle is optimised by methods that take into account motor speed and load.

- 3.1 Thus, the subject matter of claim 1 differs from the known method in that no average values (that is to say mean values) are detected for power input (that is to say load) or voltage/current.
- 3.2 The problem addressed by the present invention can consequently be regarded as that of implementing the teaching of document D1.
- 3.3 The solution to the above problem, as proposed in claim 1 of the present application, cannot be considered inventive (PCT Article 33(3)). The reasons are as follows:
- the feature "detection of mean values" (that is to say detection of mean power input) is only one of several obvious possibilities from which a person skilled in the art would choose in order to solve the problem of interest, without thereby being inventive.

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Box No. V

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Although the application of mean values for the speed of a motor is known from D2, the use of mean values in detecting current and/or voltage in filtering data captured by sensors is conventional and is constitutes general knowledge in the art.

4. The same arguments apply in a similar manner in respect of claim 5.

Thus, the subject matter of device claim 5 does not involve an inventive step (PCT Article 33(3)).

5. Dependent claims 2 to 4 and 6 to 10 contain no features which, combined with the features of any claim to which they refer, meet the PCT requirements for inventive step (see documents D1 and D2, and the relevant passages cited in the search report).